



THE ROCKEFELLER UNIVERSITY

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PRESIDENT

Dr. Frank Fenner
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Dear Frank:

Thank you for writing me about your memoir on Mac Burnet.

Yes, indeed I had read Burnet's papers when I was quite young. I did not then nor ever later regard them as out of date! I am sure that I read his 1934 review on bacteriophage in Biological Reviews somewhere around 1941-42. His book "Virus as Organism" 1945, loomed only behind Rene Dubos' "The Bacterial Cell", in helping me frame a comprehensive biological perspective on viruses and on bacteria. His work on lysogenicity prepared me to accept the authenticity of that phenomenon at a time when Delbruck was quite hostile to it. I think we took that up in publication #32 and as well as in #26B. There in fact there was an anticipation of lysogenic conversion which I ~~seized~~ upon with great fascination.

My trip to Melbourne in 1957 was predicated on the hope of learning about influenza genetics from Mac. As you know when I got there he was just turning his full attention to antibody formation -- a subject on which I had also read his writings. I think that the result of that encounter is well encapsulated in my paper in Science 129:1649-53, 1959. Gus Nossal can certainly fill you in further about that.

In 1955 I had walked right up to the elective theory of antibody formation (having reached that conclusion with respect to induced enzyme formation) but then walked right away from it under the impression that there was an infinity of antibody species, which therefore could not be genetically predetermined. It was my meeting with Burnet in 1957 that reopened my eyes on that question.

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On the other hand I found Burnet remarkably uninformed with respect to modern views of the mechanisms of protein synthesis, DNA coding etc. and that theoretical article in Science was an effort to bridge the gap between Burnet's marvelous biological intuition and a more modern molecular perspective. This was a zone in which we could never really quite come to closure; but it did not in any way diminish my profound admiration for his sense of an organism.

His biological perspectives were then very important to me not only in thinking about viruses, but in thinking about populations of microorganisms and their evolution and in turn the genetic foundations of their behavior.

Do get Gus to fill in on all of that background, as I am sure you are doing.

I have had a fair bit of experience lately in drafting and reviewing biographical material. If it would suit you I would be more than pleased to review a draft of your manuscript for either of two possibly useful functions for you: 1) a general critical perspective about scientific biography, and 2) what I can then fill in by way of data from my own personal experience and recollection, as well perhaps as from what I can dig out of my correspondence files.

In any case you have an estimable task: Ecce homo! And my best wishes to you for that and for all else.

Yours sincerely,

Joshua Lederberg

P.S. I have mentioned your project to Kenneth Schaffner who has written perceptively on the history of modern immunology. I hope he will send you some material.

Encl.